Air and Radiation Global Programs Division 6205J

# Foam Sector Substitutes Under SNAP as of September 28, 2006 SNAP Information: http://www.epa.gov/ozone/snap

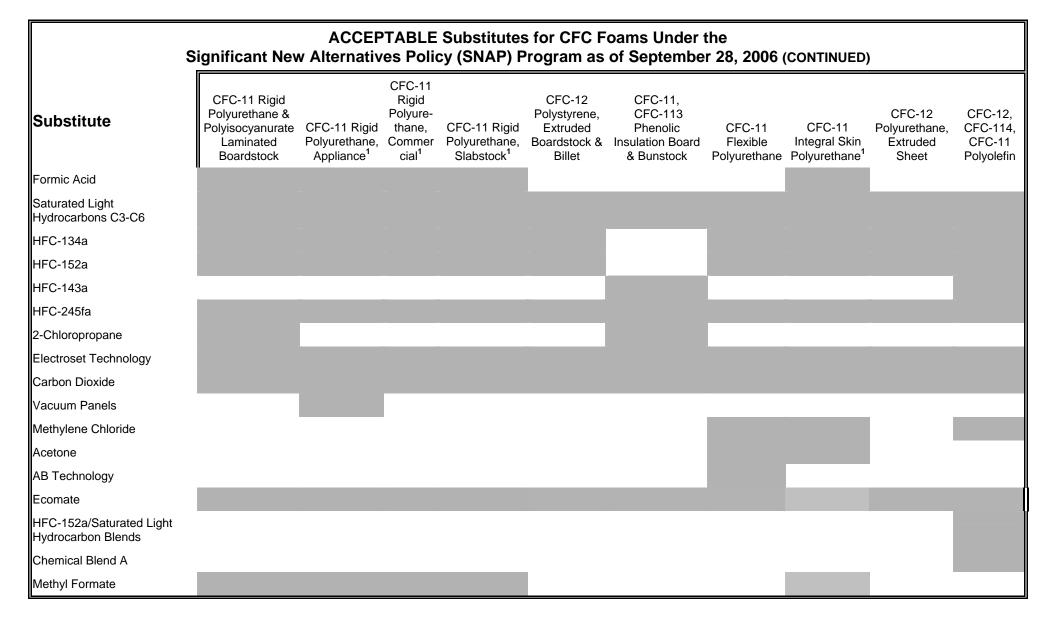
EPA has created the Significant New Alternatives Policy (SNAP) Program under section 612 of the Clean Air Act Amendments. SNAP evaluates alternatives to ozone-depleting substances. Substitutes are reviewed on the basis of ozone depletion potential, global warming potential, toxicity, flammability, and exposure potential as described in the March 18, 1994 final SNAP rule (59 FR 13044). Lists of acceptable and unacceptable substitutes will be updated periodically in the Federal Register. The following SNAP notices and subsequent final rules are included in this list: August 26, 1994 (59 FR 44240), January 13, 1995 (60 FR 3318), June 13, 1995 (60 FR 31092), July 28, 1995 (60 FR 38729), February 8, 1996 (61 FR 4736), May 22, 1996 (61 FR 25585), September 5, 1996 (61 FR 47012), October 16, 1996 (61 FR 54030), March 10, 1997 (62 FR 10700), June 3, 1997 (62 FR 30275), February 24, 1998 (63 FR 9151), May 22, 1998 (63 FR 28251), January 26, 1999 (64 FR 3861), April 28, 1999 (64 FR 22981), June 8, 1999 (64 FR 30410), December 6, 1999 (64 FR 68039), April 11, 2000 (65 FR 19327), June 19, 2000 (65 FR 37900), December 18, 2000 (65 FR 78977), July 22, 2002 (67 FR 47703), August 21, 2003 (68 FR 50533), September 30, 2004 (69 FR 58269), October 1, 2004 (69 FR 58903), and September 28, 2006 (71 FR 56884).

ACCEPTABLE Substitutes for CFC Foams Under the Significant New Alternatives Policy (SNAP) Program as of September 28, 2006									
Substitute	CFC-11 Rigid Polyurethane & Polyisocyanurate Laminated Boardstock	CFC-11 Rigid Polyurethane, Appliance <sup>1</sup>	CFC-11 Rigid Polyurethane, Commercial <sup>1</sup>		CFC-12 Polystyrene, Extruded Boardstock & Billet	CFC-11, CFC- 113 Phenolic Insulation Board & Bunstock	CFC-11 Flexible Polyurethane	CFC-12 Polyurethane, Extruded Sheet	CFC-12, CFC- 114, CFC-11 Polyolefin <sup>2</sup>
HCFC-123									
HCFC-142b									
HCFC-22									
HCFC-22 / HCFC-141b Blends									
HCFC-141b / HCFC-123 Blends									
HCFC-22 / HCFC-142b Blends									
HCFC-22 / Saturated Light Hydrocarbons C3-C6 Blends									

#### NOTE:

- 1. Acceptability listings include blends of acceptable substitutes in these end-uses.
- 2. Under the Section 610 Non-Essential Use Ban, the sale and distribution or offer for sale and distribution of polyolefin foam manufactured with HCFCs is banned except for closed cell rigid polyethylene foam when such foam is suitable in shape, thickness and design to be used as a product that provides insulation around pipes used in heating, plumbing, refrigeration, or industrial process systems.

=Acceptable



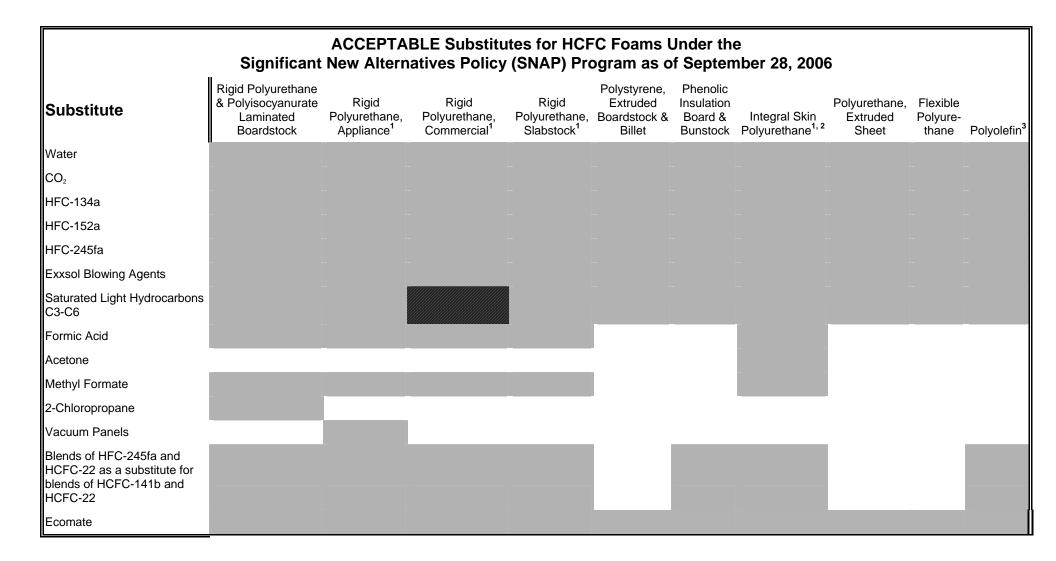
### NOTE:

<sup>1. -</sup> Acceptability listings include blends of acceptable substitutes in these end-uses.

<sup>2. -</sup> Under the Section 610 Non-Essential Use Ban, the sale and distribution or offer for sale and distribution of polyolefin foam manufactured with HCFCs is banned except for closed cell rigid polyethylene foam when such foam is suitable in shape, thickness and design to be used as a product that provides insulation around pipes used in heating, plumbing, refrigeration, or industrial process systems.

UNACCEPTABLE Substitutes for CFC Foams Under the
Significant New Alternatives Policy (SNAP) Program as of September 28, 2006

Substitute	ODS Being Replaced	End-Use	Reason		
HCFC-141b	CFC-11	Polyolefin	HCFC-141b has an ODP of 0.11, almost equivalent to that of methyl chloroform, a Class I substance. The Agency believes that non-ODP alternatives are sufficiently available to render the use of HCFC-141b unnecessary in polyolefin foams.		
HCFC-124	CFC-11, 12,113,114	All	Alternatives exist with lower or zero-ODP.		
HCFC-141b	CFC-11	All			



### NOTE:

- 1. Acceptability listings include blends of acceptable substitutes in these end-uses.
- 2. Under the Section 610 Non-Essential Use Ban, the sale and distribution of integral skin foam manufactured with HCFCs (with the exception of auto safety foam) was banned as of January 1, 1994. HCFCs were banned from auto safety integral skin foam effective January 1, 1996.
- 3. Under the Section 610 Non-Essential Use Ban, the sale and distribution or offer for sale and distribution of polyolefin foam manufactured with HCFCs is banned except for closed cell rigid polyethylene foam when such foam is suitable in shape, thickness and design to be used as a product that provides insulation around pipes used in heating, plumbing, refirgeration, or industrial process systems.

Substitutes for HCFC Foams that Are ACCEPTABLE SUBJECT TO NARROWED USE LIMITS Under the
Significant New Alternatives Policy (SNAP) Program as of September 28, 2006

Substitute	Replaced	
		Rigid polyruethane in Commercial Refrigeration, Sandwich Panels,
HCFC-22, HCFC-142b, or blends thereof	HCFC-141b	and Slabstock and Other Foams

**End-Use** 

ODS Being

## **Further Information**

Users must evaluate other acceptable non-ozone-depleting substitutes to determine that HCFC-22/HCFC-142b use is necessary to meet performance or safety requirements. Users must determine that there are technical constraints that preclude the use of other available substitutes. Documentation of this evaluation must be available for review upon request.

UNACCEPTABLE Substitutes for HCFC Foams Under the Significant New Alternatives Policy (SNAP) Program as of September 28, 2006					
Substitute	ODS Being Replaced	End-Use(s)	Reason		
HCFC-22, HCFC-142b, or blends thereof	HCFC-141b	Rigid polyurethane or Polyisocyanurate Boardstock, Appliance, Spray foams	Alternatives exist with lower or zero-ODP.		
HCFC-124	HCFC-22, HCFC- 142b, HCFC- 141b, HCFC-123, or blends thereof	All	Alternatives exist with lower or zero-ODP.		